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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,139	02/20/2004	Guido Desie	AGFA1-0047	7093
23550	7590	03/06/2006	EXAMINER	
HOFFMAN WARNICK & D'ALESSANDRO, LLC			NGUYEN, LAMSON D	
75 STATE STREET			ART UNIT	
14TH FL			PAPER NUMBER	
ALBANY, NY 12207			2861	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/783,139	Applicant(s) DESIE, GUIDO	
	Examiner Lamson D. Nguyen	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/08/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 5, 8-9 are rejected under 35 U.S.C. 102(a) as being anticipated by Kneezel (6,375,294).

Kneezel teaches a grey scale printing method and apparatus comprising:

Claims 1, 8:

- delivering at least a number of first droplets of printing material of a colour with a first volume from a first printhead (figure 5 teaches printing of large drops; column 11, lines 7-12 teach large nozzles 310 disposed on a first ejector head)
- delivering a number of second droplets of printing material of that color with a second volume from a second printhead, the first volume and the second volume being different (figure 5 teaches printing of small drops; column 11, lines 7-12 teach small nozzles 312 disposed on a second printhead)
- merging together said number of first droplets and number of second droplets on a target pixel position on the printing medium to obtain a given greyscale dot on the printing medium (figure 5 teaches large drops and smaller drops

“merging” together or superposed on each other to create different greyscale tones)

Claims 2, 9:

- wherein the first printhead is for delivering droplets of a single volume, equal to said first volume, and the second printhead is for delivering droplets of a single volume, equal to said second volume (figure 5; column 11, lines 7-12 teach large nozzles 310 disposed on the first printhead and smaller nozzles 312 disposed on the second printhead)

Claim 3:

- comprising a dithering step to increase the number of reproducible grey scale tones (figures 4-6 teach combinations of different sized dots to create greyscale tones)

Claim 5:

- the first printhead and the second printhead having a first and second intrinsic droplet frequency, a nominal printing frequency being the lowest of the two frequencies, the method further comprising printing at the nominal frequency (column 6, teaches large spots printed at a frequency F and both of the smaller sized spots printed at a frequency 2F).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kneezel in view of Barr et al. (US 2004/0223014).

Kneezel teaches all claimed features of the invention except:

- (Claim 4), a dithering step to locally mask defects

It is well-known in the art to use a print masks to compensate for a defective nozzle, as taught by Barr et al. (figure 6, step 148).

Therefore, it would have been obvious to one having ordinary skills in the art at the time of the invention to modify the invention of Kneezel to incorporate the teaching of a printmask taught by Barr et al for the purpose of compensating for a defective nozzle to achieve higher quality printing.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kneezel in view of Barr et al. as applied to claim 8 above, and further in view of Hermanson (5,581,284).

Kneezel in view of Barr et al teaches all claimed features of the invention including when if a marking element for a specific color is defective, printing with this marking element is alternated with or replaced by a dithering pattern formed by printing with another nozzle (figure 6, step 148; paragraph 33 teaches how a printmask works to manipulate how a nozzle prints).

However, Kneezel in view of Barr et al did not teach an instance where if a marking element of a printhead for a specific color is defective, printing with this marking element is replaced by printing with a corresponding marking element *from another printhead* for that specific color.

It is well-known in the art of inkjet printers to utilize a working nozzle from another printhead to compensate for a defective nozzle of a printhead, as taught by Hermanson (figures 3-6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Kneezel in view of Barr et al to incorporate the teaching of utilizing a working nozzle from another printhead as taught by Hermanson for the purpose of compensating for the defective nozzle to achieve better quality printing.

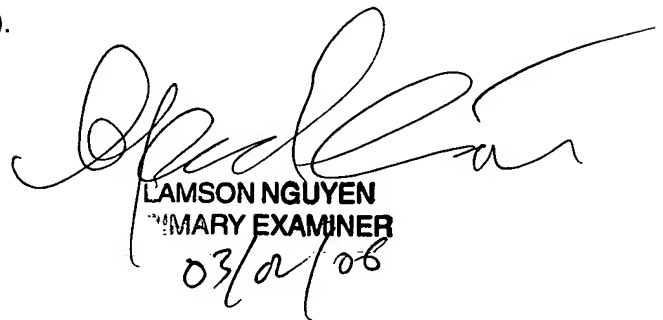
Allowable Subject Matter

Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamson D. Nguyen whose telephone number is 571-272-2259. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Talbott can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LAMSON NGUYEN
PRIMARY EXAMINER
03/02/06